Preliminary Classification:

Proposed Class:

Subclass:

NOTE: "All applicants are requested to include a preliminary classification on newly filed patent applications. The preliminary classification, preferably class and subclass designations, should be identified in the upper right-hand comer of the letter of transmittal accompanying the application papers, for example 'Proposed Class 2, subclass 129.' " M.P.E.P. § 601, 7th ed.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Box Patent Application Assistant Commissioner for Patents Washington, D.C. 20231

NEW APPLICATION TRANSMITTAL

Transmitted herewith for filing is the patent application of

Inventor(s): Mark W. Perlin

WARNING: 37 C.F.R. § 1.41(a)(1) points out:

"(a) A patent is applied for in the name or names of the actual inventor or inventors.

"(1) The inventorship of a nonprovisional application is that inventorship set forth in the oath or declaration as prescribed by § 1.63, except as provided for in § 1.53(d)(4) and § 1.63(d). If an oath or declaration as prescribed by § 1.63 is not filed during the pendency of a nonprovisional application, the inventorship is that inventorship set forth in the application papers filed pursuant to § 1.53(b), unless a petition under this paragraph accompanied by the fee set forth in § 1.17(i)

is filed supplying or changing the name or names of the inventor or inventors."

For (title): METHOD AND SYSTEM FOR NUCLEIC ACID SEQUENCING

CERTIFICATION UNDER 37 C.F.R. § 1.10*

(Express Mail label number is mandatory.) (Express Mail certification is optional.)

I hereby certify that this New Application Transmittal and the documents referred to as attached therein are being deposited with the United States Postal Service on this date. May 4; 2001 in an envelope deposited with the United States Postal Service on this date May 4; as "Express Mail Post Office to Addressee," mailing Label Number EL707030641US dressed to the: Assistant Commissioner for Patents, Washington, D.C. 20231.

Tracey L. Milka

(type or print name of person mailing paper)

Signature of person mailing paper

WARNING: Certificate of mailing (first class) or facsimile transmission procedures of 37 C.F.R. § 1.8 cannot be used to obtain a date of mailing or transmission for this correspondence.

*WARNING: Each paper or fee filed by "Express Mail" must have the number of the "Express Mail" mailing label placed thereon prior to mailing. 37 C.F.R. § 1.10(b).

"Since the filing of correspondence under § 1.10 without the Express Mail mailing label thereon is an oversight that can be avoided by the exercise of reasonable care, requests for waiver of this requirement will not be granted on petition." Notice of Oct. 24, 1996, 60 Fed. Reg. 56,439, at 56,442.

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N ij J I Į,F

1. Type of Application

This	DEM	application	is	for	aln	'n
11113	I ICVV	application	10	101	au	,,

(check one applicable item below)

2	X	Original (nonprovisional)
		Design
		☐ Plant
WARNI	ING:	Do not use this transmittal for a completion in the U.S. of an International Application under 35 U.S.C. § 371(c)(4), unless the International Application is being filed as a divisional, continuation or continuation-in-part application.
WARN	ING:	Do not use this transmittal for the filing of a provisional application.
NOTE:	TF	one of the following 3 items apply, then complete and attach ADDED PAGES FOR NEW APPLICATION IANSMITTAL WHERE BENEFIT OF A PRIOR U.S. APPLICATION CLAIMED and a NOTIFICATION PARENT APPLICATION OF THE FILING OF THIS CONTINUATION APPLICATION.
Ε]	Divisional.
Ε		Continuation.
Γ	٦	Continuation-in-part (C-I-P).

2. Benefit of Prior U.S. Application(s) (35 U.S.C. §§ 119(e), 120, or 121)

NOTE: A nonprovisional application may claim an invention disclosed in one or more prior filed copending nonprovisional applications or copending international applications designating the United States of America. In order for a nonprovisional application to claim the benefit of a prior filed copending nonprovisional application or copending international application designating the United States of America, each prior application must name as an inventor at least one inventor named in the later filed nonprovisional application and disclose the named inventor's invention claimed in at least one claim of the later filed nonprovisional application in the manner provided by the first paragraph of 35 U.S.C. § 112. Each prior application must also be:

- (i) An international application entitled to a filing date in accordance with PCT Article 11 and designating the United States of America; or
 - (ii) Complete as set forth in § 1.51(b); or
- (iii) Entitled to a filing date as set forth in § 1.53(b) or § 1.53(d) and include the basic filing fee set forth in § 1.16; or
- (iv) Entitled to a filing date as set forth in § 1.53(b) and have paid therein the processing and retention fee set forth in § 1.21(l) within the time period set forth in § 1.53(f).

37 C.F.R. § 1.78(a)(1).

NOTE: If the new application being transmitted is a divisional, continuation or a continuation-in-part of a parent case, or where the parent case is an International Application which designated the U.S., or benefit of a prior provisional application is claimed, then check the following item and complete and attach ADDED PAGES FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF PRIOR U.S. APPLICATION(S) CLAIMED.

WARNING: If an application claims the benefit of the filing date of an earlier filed application under 35 U.S.C. §§ 120, 121 or 365(c), the 20-year term of that application will be based upon the filing date of the earliest U.S. application that the application makes reference to under 35 U.S.C. §§ 120, 121 or 365(c). (35 U.S.C. § 154(a)(2) does not take into account, for the determination of the patent term, any application on which priority is claimed under 35 U.S.C. §§ 119, 365(a) or 365(b).) For a c-i-p application, applicant should review whether any claim in the patent that will issue is supported by an earlier application and, if not, the applicant should consider canceling the reference to the earlier filed application. The term of a patent is not based on a claim-by-claim approach. See Notice of April 14, 1995, 60 Fed. Reg. 20,195, at 20,205.

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WARNIN	IG: When the last day of pendency of a provisional application falls on a Saturday, Sunday, or Federal holiday within the District of Columbia, any nonprovisional application claiming benefit of the provisional application must be filed prior to the Saturday, Sunday, or Federal holiday within the District of Columbia. See 37 C.F.R. § 1.78(a)(3).
	The new application being transmitted claims the benefit of prior U.S. application(s). Enclosed are ADDED PAGES FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF PRIOR U.S. APPLICATION(S) CLAIMED.
3. Pape	ers Enclosed
	equired for filing date under 37 C.F.R. § 1.53(b) (Regular) or 37 C.F.R. § 1.153 esign) Application
<u>_56</u> _I	Pages of specification
3	Pages of claims
6	Sheets of drawing
WARNIN	IG: DO NOT submit original drawings. A high quality copy of the drawings should be supplied when filing a patent application. The drawings that are submitted to the Office must be on strong, white, smooth, and non-shiny paper and meet the standards according to § 1.84. If corrections to the drawings are necessary, they should be made to the original drawing and a high-quality copy of the corrected original drawing then submitted to the Office. Only one copy is required or desired. For comments on proposed then-new 37 C.F.R. § 1.84, see Notice of March 9, 1988 (1990 O.G. 57-62).
<i>j</i> 1	"Identifying indicia, if provided, should include the application number or the title of the invention, inventor's name, docket number (if any), and the name and telephone number of a person to call if the Office is unable to match the drawings to the proper application. This information should be placed on the back of each sheet of drawing a minimum distance of 1.5 cm. (5/8 inch) down from the top of the page" 37 C.F.R. § 1.84(c)).
	(complete the following, if applicable)
	The enclosed drawing(s) are photograph(s), and there is also attached a "PETITION TO ACCEPT PHOTOGRAPH(S) AS DRAWING(S)." 37 C.F.R. § 1.84(b).
	formal
X	informal
B. Ot	her Papers Enclosed
7F	Pages of declaration and power of attorney
1_F	Pages of abstract
_0_0	Other
4. Addit	tional papers enclosed
	Amendment to claims
	Cancel in this applications claims before calculating the filing fee. (At least one original independent claim must be retained for filing purposes.)
	Add the claims shown on the attached amendment. (Claims added have been numbered consecutively following the highest numbered original claims.)
	Preliminary Amendment
	Information Disclosure Statement (37 C.F.R. § 1.98)
	Form PTO-1449 (PTO/SB/08A and 08B)
	Citations

		aration of Biological Deposit
	perta amir	mission of "Sequence Listing," computer readable copy and/or amendment aining thereto for biotechnology invention containing nucleotide and/or no acid sequence.
	Auth tive	norization of Attorney(s) to Accept and Follow Instructions from Representa-
	Spe	cial Comments
		n or oath (including power of attorney)
	the prior by all or applicate the sign by a state being fi declarate person execute	reexecuted declaration is not required in a continuation or divisional application provided that it is reported application contained a declaration as required, the application being filed is if fewer than all the inventors named in the prior application, there is no new matter in the prior being filed, and a copy of the executed declaration filed in the prior application (showing nature or an indication thereon that it was signed) is submitted. The copy must be accompanied atternent requesting deletion of the names of person(s) who are not inventors of the application filed. If the declaration in the prior application was filed under § 1.47, then a copy of that the tion must be filed accompanied by a copy of the decision granting § 1.47 status or, if a nonsigning under § 1.47 has subsequently joined in a prior application, then a copy of the subsequently and declaration must be filed. See 37 C.F.R. §§ 1.63(d)(1)–(3).
NOTE:	is direct abbrevia country C.F.R.	ration filed to complete an application must be executed, identify the specification to which it ted, identify each inventor by full name including family name and at least one given name, without ation together with any other given name or initial, and the residence, post office address and or citizenship of each inventor, and state whether the inventor is a sole or joint inventor. 37 § 1.63(a)(1)-(4).
NOTE:	as prese as prese is that in this par	ventorship of a nonprovisional application is that inventorship set forth in the oath or declaration cribed by § 1.62, except as provided for in § 1.53(d)(4) and § 1.63(d). If an oath or declaration cribed by § 1.63 is not filed during the pendency of a nonprovisional application, the inventorship inventorship set forth in the application papers filed pursuant to § 1.53(b), unless a petition under ragraph accompanied by the fee set forth in § 1.17(i) is filed supplying or changing the name es of the inventor or inventors." 37 C.F.R. § 1.41(a)(1).
5	Enc	closed
	Exe	ecuted by
		(check all applicable boxes)
	X	inventor(s).
		legal representative of inventor(s). 37 C.F.R. §§ 1.42 or 1.43.
		joint inventor or person showing a proprietary interest on behalf of inventor who refused to sign or cannot be reached.
		☐ This is the petition required by 37 C.F.R. § 1.47 and the statement required by 37 C.F.R. § 1.47 is also attached. See item 13 below for fee.
_	_	t Enclosed.
NOTE:	the U.S	the filing is a completion in the U.S. of an International Application or where the completion of S. application contains subject matter in addition to the International Application, the application et reated as a continuation or continuation-in-part, as the case may be, utilizing ADDED PAGE NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF PRIOR U.S. APPLICATION CLAIMED.
		Application is made by a person authorized under 37 C.F.R. § 1.41(c) on behalf of all the above named inventor(s).
		(New Application Transmittal I4-11—page 4 of 11)

(The declaration or oath, along with the surcharge required by 37 C.F.R. § 1.16(e) can be filed subsequently).
Showing that the filing is authorized. (not required unless called into question. 37 C.F.R. § 1.41(d))
6. Inventorship Statement
WARNING: If the named inventors are each not the inventors of all the claims an explanation, including the ownership of the various claims at the time the last claimed invention was made, should be submitted.
The inventorship for all the claims in this application are:
☐ The same.
or
 Not the same. An explanation, including the ownership of the various claims at the time the last claimed invention was made,
☐ is submitted.
☐ will be submitted.
7. Language
NOTE: An application including a signed oath or declaration may be filed in a language other than English. An English translation of the non-English language application and the processing fee of \$130.00 required by 37 C.F.R. § 1.17(k) is required to be filed with the application, or within such time as may be set by the Office. 37 C.F.R. § 1.52(d).
☑ English
☐ Non-English
☐ The attached translation includes a statement that the translation is accurate. 37 C.F.R. § 1.52(d).
8. Assignment
☐ An assignment of the invention to
☐ is attached. A separate ☐ "COVER SHEET FOR ASSIGNMENT (DOCUMENT) ACCOMPANYING NEW PATENT APPLICATION" or ☐ FORM PTO 1595 is also attached.
☐ will follow.
NOTE: "If an assignment is submitted with a new application, send two separate letters-one for the application and one for the assignment." Notice of May 4, 1990 (1114 O.G. 77-78).
WARNING: A newly executed "CERTIFICATE UNDER 37 C.F.R. § 3.73(b)" must be filed when a continuation-in-part application is filed by an assignee. Notice of April 30, 1993, 1150 O.G. 62-64.

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9.	Certified	Copy
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Certified copy(ies) of application(s)

Country	Appln. No.			Filed
Country	Appin. No.	-		Filed
Country				
Country	Appin. No.			Filed
from which priority is claimed				
☐ is (are) attached.				
☐ will follow.				
NOTE: The foreign application form declaration. 37 C.F.R. § 1.5	5(a) and 1.63.			
NOTE: This item is for any foreign U.S. application or Internation § 120 is itself entitled to price PAGES FOR NEW APPLICA CLAIMED.	nnal Application from whic prity from a prior foreign a	h this pplica	application cla tion, then com	ims benefit under 35 U.S.C. olete item 18 on the ADDED
10. Fee Calculation (37 C.F.	R. § 1.16)			
A. 🗵 Regular application				
	CLAIMS AS FIL	ED		
Number filed	Number Extra		Rate	Basic Fee 37 C.F.R. § 1.16(a) \$8800.00 710
Total Claims (37 C.F.R. § 1.16(c)) 16 – 2	20 = 0	×	\$ 18.00	0.00
Independent				
Claims (37 C.F.R. § 1.16(b)) 3 -	3 = 0	×	\$ 78.00	0.00
Multiple dependent claim(s), if any (37 C.F.R. § 1.16(d))		+	\$260.00	
☐ Amendment cancell	ling extra claims is	enclo	sed.	
☐ Amendment deletine	g multiple-depender	ıcies	is enclosed	l.
☐ Fee for extra claims	s is not being paid a	at thi	s time.	
NOTE: If the fees for extra claims an prior to the expiration of th notice of fee deficiency. 37	e time period set for resp	ıst be oonse	paid or the clai by the Patent	ms cancelled by amendment, and Trademark Office in any
F	Filing Fee Calculatio	n		\$ 710.00
B. Design application (\$310.00—37 C.F.R	i. § 1.16(f))			
	Filing Fee Calculatio	n		\$

C.		Plant application	
		(\$480.00—37 C.F.R. § 1.16(g))	e
44	Cmal	Filing fee calculation	\$
11.		I Entity Statement(s)	
	X	Statement(s) that this is a filing by a small is (are) attached.	entity under 37 C.F.R. § 1.9 and 1.27
WA	RNING	"Status as a small entity must be specifically estate the status is available and desired. Status as a smalfect any other application or patent, including indirectly dependent upon the application or patent refiling of an application under § 1.53 as a continual a continued prosecution application under § 1.53(c) a new determination as to continued entitlement to application. A nonprovisional application claiming if 365(c) of a prior application, or a reissue application or in the patent if the nonprovisional application or in the statement in the prior application statement in the prior application or in the patent desired. The payment of the small entity basic statut for purposes of this section." 37 C.F.R. § 1.28(a)(i)	all entity in one application or patent does not applications or patents which are directly or thin which the status has been established. The ation, division, or continuation-in-part (including d)), or the filing of a reissue application requires small entity status for the continuing or reissue benefit under 35 U.S.C. § 119(e), 120, 121, or tion may rely on a statement filed in the prior oplication or the reissue application includes a on or in the patent or includes a copy of the and status as a small entity is still proper and tory filing fee will be treated as such a reference
WA	RNING:	"Small entity status must not be established when the can unequivocally make the required self-certification 1996 (emphasis added).	
		(complete the following, if	applicable)
		Status as a small entity was claimed in p	rior application
		, filed on	, from which benefit
		is being claimed for this application unde	r:
		35 U.S.C. § ☐ 119(e), ☐ 120, ☐ 121, ☐ 365(c),	
		and which status as a small entity is sti	Il proper and desired.
		☐ A copy of the statement in the prior	application is included.
		Filing Fee Calculation (50% of A, B o	r C above)
		\$ 355 . 00	
NO	are	y excess of the full fee paid will be refunded if small ender the full fee paid will be refunded if small ender the filed within 2 months of the date of timely payment tendable under § 1.136. 37 C.F.R. § 1.28(a).	· ·
12.	Requ	est for International-Type Search (37 C	.F.R. § 1.104(d))
		(complete, if applica	able)
		Please prepare an international-type search when national examination on the merits	

13.	Fee	Payn	nent Being Made at This Time		
		Not	Enclosed		
			No filing fee is to be paid at this time. (This and the surcharge required by 37 C.F.R. § subsequently.)	1.16(e)	can be paid
		Enc	losed		
		X	Filing fee	\$	355.00
			Recording assignment (\$40.00; 37 C.F.R. § 1.21(h)) (See attached "COVER SHEET FOR ASSIGNMENT ACCOMPANYING NEW APPLICATION".)	\$	
			Petition fee for filing by other than all the inventors or person on behalf of the inventor where inventor refused to sign or cannot be reached (\$130.00; 37 C.F.R. §§ 1.47 and 1.17(i))	\$	
			For processing an application with a specification in a non-English language (\$130.00; 37 C.F.R. §§ 1.52(d) and 1.17(k))	\$	
			Processing and retention fee (\$130.00; 37 C.F.R. §§ 1.53(d) and 1.21(l))	\$	
			Fee for international-type search report (\$40.00; 37 C.F.R. § 1.21(e))	\$	
NO ⁻		failing to 37 C.F.: either tl	R. § 1.21(I) establishes a fee for processing and retaining any appli to complete the application pursuant to 37 C.F.R. § 1.53(f) and thin R. §§ 1.53 and 1.78(a)(1), indicate that in order to obtain the benefing the basic filing fee must be paid, or the processing and retention for the year from notification under § 53(f).	s, as well a fit of a prior	as the changes to r U.S. application, 1(I) must be paid,
			Total fees enclosed	\$	355.00
14.	Me		of Payment of Fees		
	X	Che	eck in the amount of \$\frac{355.00}{}		
		\$		in the	amount of
			uplicate of this transmittal is attached.		
NO		Fees sh § 1.22(nould be itemized in such a manner that it is clear for which purpose b).	the fees a	re paid. 37 C.F.R.

after final action.

5. Au	thorization to Charge Additional	Fees
WARNII	NG: If no fees are to be paid on filing, the	e following items should <u>not</u> be completed.
WARNII	NG: Accurately count claims, especially me if extra claim charges are authorized.	ultiple dependent claims, to avoid unexpected high charges,
X	•	thorized to charge the following additional fees tire pendency of this application to Account No.
	☑ 37 C.F.R. § 1.16(a), (f) or (g) (filing fees)
	37 C.F.R. § 1.16(b), (c) and	d (d) (presentation of extra claims)
NOTE:	must only be paid or these claims cancelle set for response by the PTO in any notice	le dependent claims not paid on filing or on later presentation ed by amendment prior to the expiration of the time period of fee deficiency (37 C.F.R. § 1.16(d)), it might be best not claim fees. except possibly when dealing with amendments

- ☐ 37 C.F.R. § 1.16(e) (surcharge for filing the basic filing fee and/or declaration on a date later than the filing date of the application)
- 37 C.F.R. § 1.17(a)(1)-(5) (extension fees pursuant to § 1.136(a)).
- ☐ 37 C.F.R. § 1.17 (application processing fees)
- NOTE: ". . . A written request may be submitted in an application that is an authorization to treat any concurrent or future reply, requiring a petition for an extension of time under this paragraph for its timely submission, as incorporating a petition for extension of time for the appropriate length of time. An authorization to charge all required fees, fees under § 1.17, or all required extension of time fees will be treated as a constructive petition for an extension of time in any concurrent or future reply requiring a petition for an extension of time under this paragraph for its timely submission. Submission of the fee set forth in § 1.17(a) will also be treated as a constructive petition for an extension of time in any concurrent reply requiring a petition for an extension of time under this paragraph for its timely submission." 37 C.F.R. § 1.136(a)(3).
 - 37 C.F.R. § 1.18 (issue fee at or before mailing of Notice of Allowance, pursuant to 37 C.F.R. § 1.311(b))
- NOTE: Where an authorization to charge the issue fee to a deposit account has been filed before the mailing of a Notice of Allowance, the issue fee will be automatically charged to the deposit account at the time of mailing the notice of allowance. 37 C.F.R. § 1.311(b).
- NOTE: 37 C.F.R. § 1.28(b) requires "Notification of any change in status resulting in loss of entitlement to small entity status must be filed in the application . . . prior to paying, or at the time of paying, . . . the issue fee. . . " From the wording of 37 C.F.R. § 1.28(b), (a) notification of change of status must be made even if the fee is paid as "other than a small entity" and (b) no notification is required if the change is to another small entity.

(New Application Transmittal [4-1]-page 9 of 11)

16. Instructions as to Overpayment

NOTE:	" Amounts of twenty-five dollars or less will not be returned unless specifically requested within
	a reasonable time, nor will the payer be notified of such amounts; amounts over twenty-five dollars may
	be returned by check or, if requested, by credit to a deposit account." 37 C.F.R. § 1.26(a).

□ Credit Account No. 19-0737

□ Refund

Reg. No. 30,587

Tel. No. (412) 621-9222

Customer No.

SIGNATURE OF PRACTITIONER

Ansel M. Schwartz

(type or print name of attorney)
One Sterling Plaza

201 N. Craig Street, Suite 304

P.O. Address

Pittsburgh, PA 15213

(New Application Transmittal [4-1]—page 10 of 11)

	Incom	poration by reference of added pages
	pr st th	heck the following item if the application in this transmittal claims the benefit of ior U.S. application(s) (including an international application entering the U.S. age as a continuation, divisional or C-I-P application) and complete and attach e ADDED PAGES FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF RIOR U.S. APPLICATION(S) CLAIMED)
		Plus Added Pages for New Application Transmittal Where Benefit of Prior U.S. Application(s) Claimed
		Number of pages added
		Plus Added Pages for Papers Referred to in Item 4 Above
		Number of pages added
		Plus added pages deleting names of inventor(s) named in prior application(s) who is/are no longer inventor(s) of the subject matter claimed in this application.
		Number of pages added
		Plus "Assignment Cover Letter Accompanying New Application"
		Number of pages added
X	State	ment Where No Further Pages Added
		no further pages form a part of this Transmittal, then end this Transmittal with is page and check the following item)
	X	This transmittal ends with this page.